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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/823,086	04/12/2004	Yun-Qing Shi	27592-00189-US1	3165

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EXAMINER

COUSO, JOSE L

ART UNIT	PAPER NUMBER
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2624

MAIL DATE	DELIVERY MODE
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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/823,086	Applicant(s) SHI ET AL.	
	Examiner Jose L. Couso	Art Unit 2624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-34 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 12, 18-24 and 29 is/are rejected.
- 7) ☒ Claim(s) 8-11, 13-17, 25-28 and 30-34 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>7/30/04, 1/17/06</u> | 6) <input type="checkbox"/> Other: ____ |

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1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-7, 12, 18-24 and 29 are rejected under 35 U.S.C. 102(e) as being anticipated by Gibson et al. (U.S. Patent No. 6,650,762).

With regard to claims 1 and 18, Gibson describes producing a histogram from a pixel domain image, the histogram establishing a relationship of possible pixel values versus respective aggregate numbers of pixels of the pixel domain image having such pixel values (see figure 3 and refer for example to column 10, lines 44-51); modifying some of the pixel values of the pixel domain image to shift a portion of the histogram such that there no longer exists an aggregate number of pixels having a first possible pixel value (refer for example to column 10, lines 56-59); and modifying some of the pixel values of the pixel domain image such that an aggregate number of pixels exist having the first possible pixel value, where the aggregate number of pixels is a function of the data to be hidden (refer for example to column 12, lines 1-4).

As to claims 2 and 19, Gibson describes wherein the first possible pixel value is at or proximate to a target possible pixel value, the target possible pixel value being

selected based on an aggregate number of pixels having the target possible pixel value (refer for example to column 12, lines 37-47).

In regard to claims 3 and 20, Gibson describes wherein the target possible pixel value is selected when the aggregate number of pixels associated therewith is at least one of (i) a maximum number, (ii) a maxima, and (iii) above a threshold number, in the histogram prior to shifting (refer for example to column 12, lines 48-66).

With regard to claims 4 and 21, Gibson describes the pixel values of the pixel domain image are modified to shift the histogram from the first possible pixel value toward a second possible pixel value and the second possible pixel value is selected when an aggregate number of pixels associated therewith is at least one of (i) a minimum number, (ii) a minima, and (iii) below a threshold number, in the histogram prior to shifting (refer for example to column 12, lines 10-14).

As to claims 5 and 22, Gibson describes wherein the second possible pixel value is selected based on its aggregate number of pixels being zero in the histogram prior to shifting (refer for example to column 11, lines 33-38).

In regard to claims 6 and 23, Gibson describes further comprising offsetting each pixel value of the pixel domain image falling between the first possible pixel value, inclusive, and a second possible pixel value, exclusive, by a shifting value such that the 4 histogram shifts from the first possible pixel value toward the second possible pixel value (refer for example to column 12, lines 51-64).

With regard to claims 7 and 24, Gibson describes wherein at least one of the shifting value is positive when the first possible pixel value is less than the second possible pixel value, the shifting value is negative when the first possible pixel value is greater than the second possible pixel value and the shifting value is ± 1 (refer for example to column 11, lines 39-65).

As to claims 12 and 29, Gibson describes a method of decoding a pixel domain image containing hidden data, the pixel domain image having been encoded with the hidden data by (i) producing a histogram, the histogram establishing a relationship of possible pixel values versus respective aggregate numbers of pixels of the pixel domain image having such pixel values, (ii) modifying some of the pixel values of the pixel domain image to shift a portion of the histogram such that there no longer exists an aggregate number of pixels having a first possible pixel value (refer for example to column 13, lines 48-64); and (iii) modifying some of the pixel values of the pixel domain image (refer for example to column 13, lines 64-67).

3. Claims 8-11, 13-17, 25-28 and 30-34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Cox et al., Zador, Brunk et al., Stach et al., Mihcak et al. and Kamijo all disclose systems similar to applicant's claimed invention.

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5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jose L. Couso whose telephone number is (571) 272-7388. The examiner can normally be reached on Monday through Friday from 6:30 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Matthew Bella, can be reached on (571) 272-7778. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the USPTO contact Center whose telephone number is (703) 308-4357.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Jose L. Couso/
Primary Examiner, Art Unit 2624
March 11, 2008